

Meredith's Day



Australian Curriculum V9.0 links for Years 3 to 4

Digital Technologies

- Generating and designing
 - [AC9TDI4P02](#)
 - [AC9TDI6P02](#)
- Producing and implementing
 - [AC9TDI4P04](#)
 - [AC9TDI6P05](#)

Learning outcomes:

All students will be able to:

- follow and describe algorithms involving sequencing, comparison operators (branching) and iteration.

In addition, some students will be able to:

- describe the connections between the algorithm steps and can create links between them.

Previous knowledge required:

To undertake this activity, students will need previous knowledge of what an algorithm is. This will have been delivered to students in Years 1/2.

Recap: An algorithm is a series of ordered steps that are required to solve a problem. In order to work, algorithms need to have their steps in the right order.

Algorithms are everywhere in our daily lives. At their simplest level, algorithms exist as a series of instructions that enable us to solve simple problems; for example, recipes or getting ready for the day. Algorithms can also be more complex. For example, some of the largest corporations use algorithms to guide our internet browsing, airports use them to program flight paths, and the health sector uses them to find donor-patient matches.

To find out more about algorithms, explore the [algorithm page](#) from the Digital Technologies Hub.

Instructions:

This activity has been designed to be undertaken in various formats to suit the learning styles and preferences of your class. This can be done as a group activity or as individual activities.

Step 1) Read '[A Day in the Life of a software engineer](#)' on the back of Meredith's career information sheet (as a class or individually)

Step 2) Tell the class you will be working on Algorithms today and share the LO, using the 'Day in the Life of' sheet as the data source.

Step 3) As a class, contribute to a list of steps that Meredith does in a day (suggested list on next page). This can be written on the class board, or students work in pairs and noted down in workbooks before discussing it as a class.

Step 4) Direct students to complete either Sheet A, B, C or D at your discretion (Please note, tasks are levelled in increasing difficulty to meet the needs of different abilities you may find in your classroom. Please choose the most appropriate for your class/individual students).

Teacher's note: Support students to understand why order is important when undertaking some tasks. Ask students if they can identify other tasks where the order of instructions is very important, such as:

- Getting undressed to hop in the shower/bath.
- Opening your mouth to have a drink of water.
- Getting a bowl for your cereal so the milk doesn't end up all over the kitchen bench.

Instructions continue on the next page.

Instructions continued:

Step 5) Extension: Ask students to identify any variables that might disrupt Meredith's day, such as:

- Expert is on leave
- Internet is down
- Emails are hacked
- Forgets password
- Testing doesn't work

Further extension - ask students who have completed their work to think of ways they can overcome the disrupting variables -

Step 6) Bring the class together and discuss work, thinking about what students found challenging, what was easy, and how their work could be improved.

Suggested steps:

1. Get to work
2. Check emails
3. Organise emails
4. Respond to emails
5. Write accessibility code
6. Send accessibility code to expert for review
7. Read review comments
8. Make required changes from comments.
9. Test code
10. Check test results
11. Fix failures found during testing
12. Submit changes to the expert for review
13. Ask the expert for clarification on review comments
14. Final check of emails.
15. Leave work

Suggested steps to reply to email:

1. Open email
2. Enter password
3. Select one email
4. Press 'reply'
5. Type my response
6. Press 'send'



Curriculum links

Links with Digital Technologies Curriculum Area

Strand	Content Description
Generating and designing	<u>AC9TDI4P02</u> - Year 3 follow and describe algorithms involving sequencing, comparison operators (branching) and iteration <u>AC9TDI6P02</u> - Year 4 design algorithms involving multiple alternatives (branching) and iteration
Producing and implementing	<u>AC9TDI4P04</u> - Year 3 implement simple algorithms as visual programs involving control structures and input <u>AC9TDI6P05</u> - Year 4 implement algorithms as visual programs involving control structures, variables and input

Sheet A

Student name: _____

Number these steps, from 1 to 15 Meredith needs to follow to do her job. Identify which step comes first and number this number 1, then find the next thing Meredith does in her day, this is step 2. Keep going until you reach number 15.

- ___ Write accessibility code
- ___ Final check of emails.
- ___ Test code
- ___ Get to work
- ___ Respond to emails
- ___ Send accessibility code to expert for review
- ___ Submit changes to expert for review
- ___ Make required changes from comments.
- ___ Leave work
- ___ Check test results
- ___ Check emails
- ___ Ask expert for clarification on review comments
- ___ Fix failures found during testing
- ___ Organise emails
- ___ Read review comments

How would Meredith reply to an email? Identify six steps she would take.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Identify three variables (problems) that might disrupt Meredith's day.

1. _____
2. _____
3. _____

Sheet B

Student name: _____

Fill in the missing words from the word bank below so Meredith can do her job.

1. Get to _____
2. _____ emails
3. Organise _____
4. Respond _____ emails
5. _____ accessibility code
6. Send accessibility code to _____ for review
7. Read review _____
8. Make required _____ from comments.
9. _____ code
10. Check test _____
11. _____ failures found during testing
12. _____ changes to expert for review
13. Ask expert for clarification on _____ comments
14. _____ check of emails.
15. _____ work

Word bank

final	write	test results
check	expert	fix
work	leave	submit
emails	comments	review
to	changes	

Identify three variables (problems) that might disrupt Meredith's day. How might she overcome these?

1. _____
2. _____
3. _____

Sheet C

Student name: _____

Identify and fill in the missing words below so Meredith can do her job.

1. Get to _____
2. _____ emails
3. Organise _____
4. Respond _____ emails
5. _____ accessibility code
6. Send accessibility code to _____ for review
7. Read review _____
8. Make required _____ from comments.
9. _____ code
10. Check test _____
11. _____ failures found during testing
12. _____ changes to expert for review
13. Ask expert for clarification on _____ comments
14. _____ check of emails.
15. _____ work

Identify as many variables (problems) as you can that might disrupt Meredith's day. How might she overcome these?

Sheet D

Student name: _____

Fill in the steps so Meredith can do her job.

1.



Pssst. We're here to help ;)

2.



3.

4.



5.

6.



7.

8.



9.



10.

11.



12.

13.



14.

15.



Identify as many variables (problems) as you can that might disrupt Meredith's day. How might she overcome these?